

Figure 1

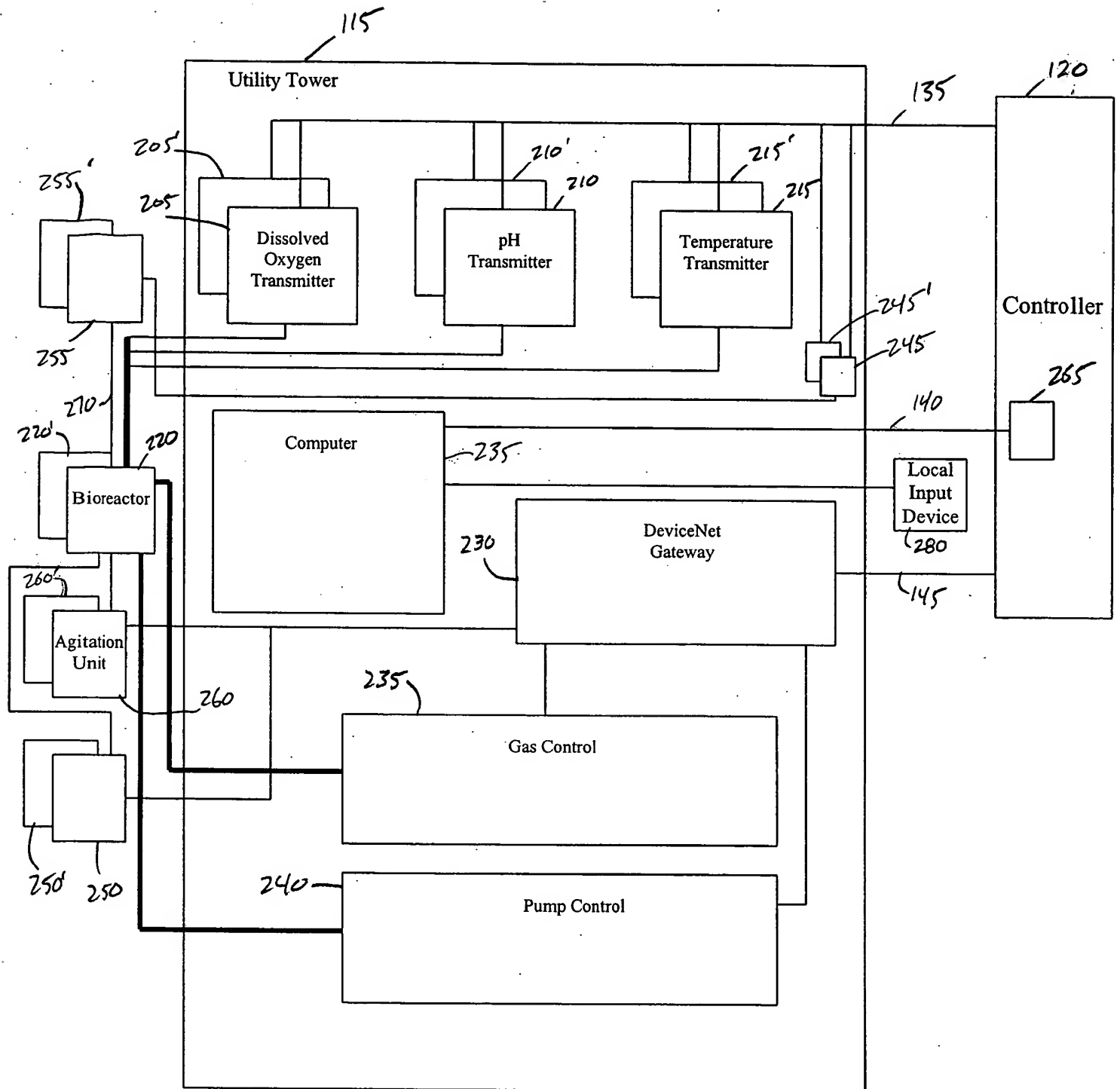
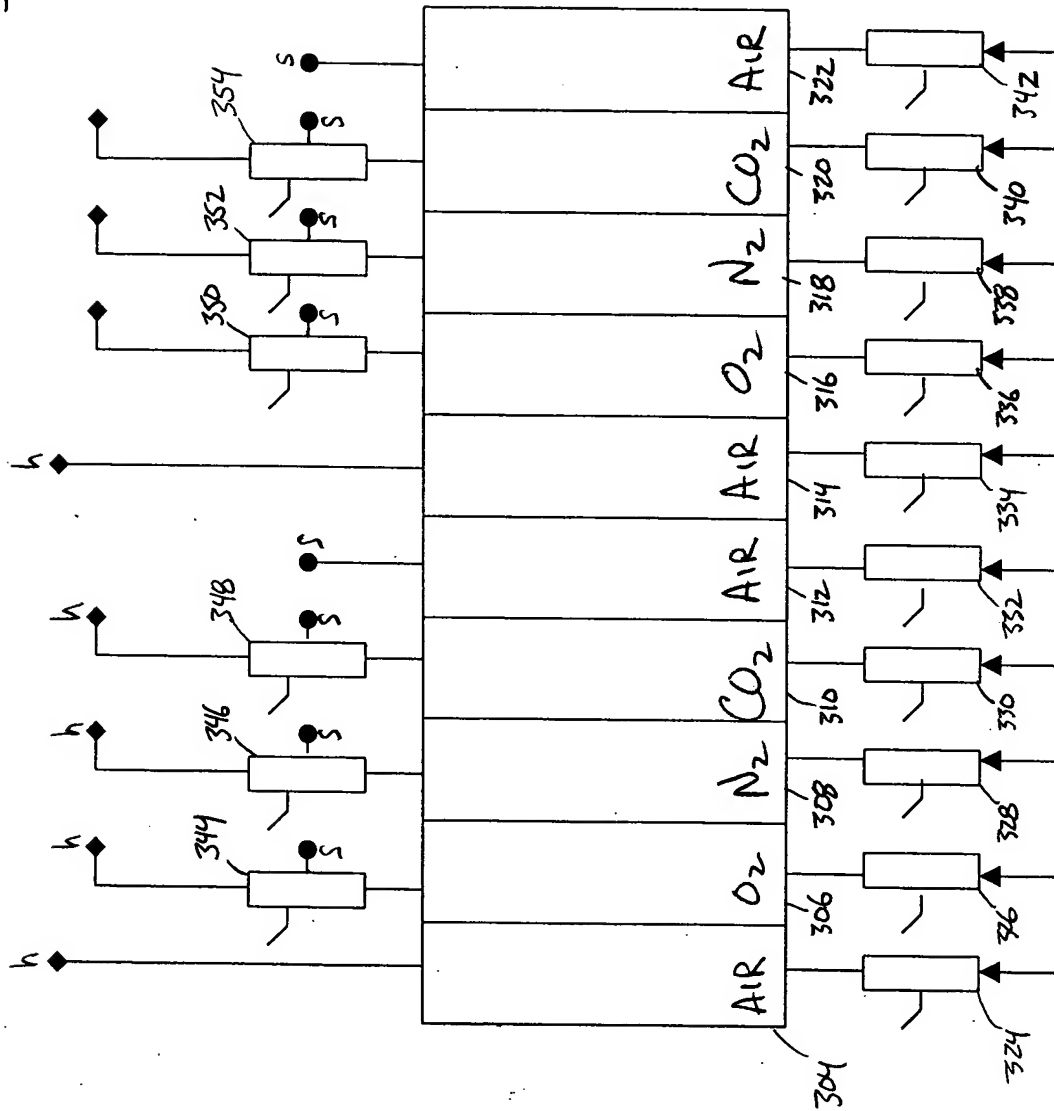


Figure 2

235



GAS SOURCES

Figure 3

240

120

Controller

230

DeviceNet
Gateway

145

240

Pump Control

430

425

435

Pump
Module

420

Pulse
Amplification
Circuit

421

422

440

445

Peristaltic
Pump

Source

To Bioreactor

Figure 4

240

120

Controller

230

DeviceNet
Gateway

145

240

Pump Control

430

425

435

Pump
Module

420

Pulse
Amplification
Circuit

421

422

440

445

Peristaltic
Pump

Source

To Bioreactor

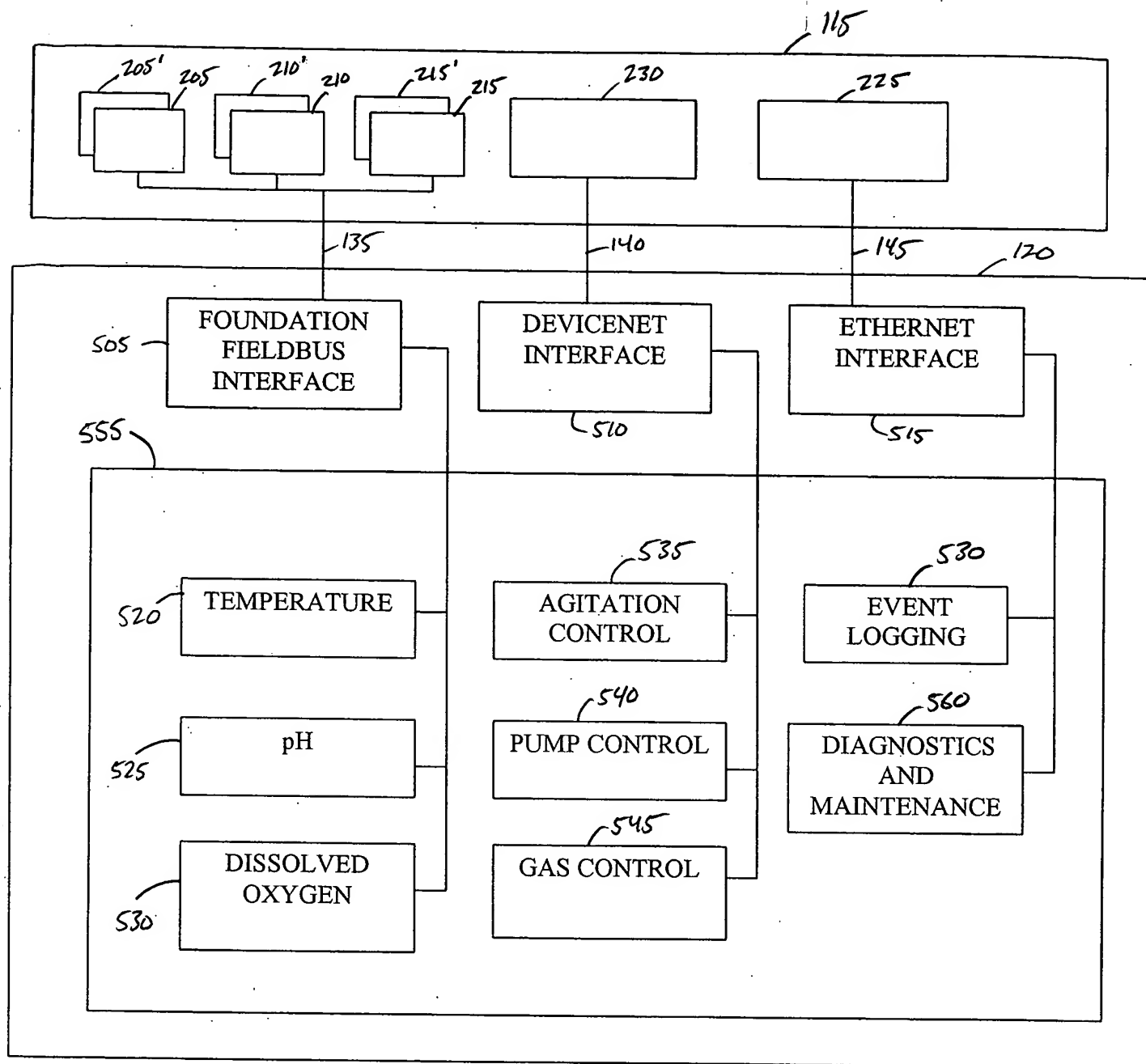


Figure 5

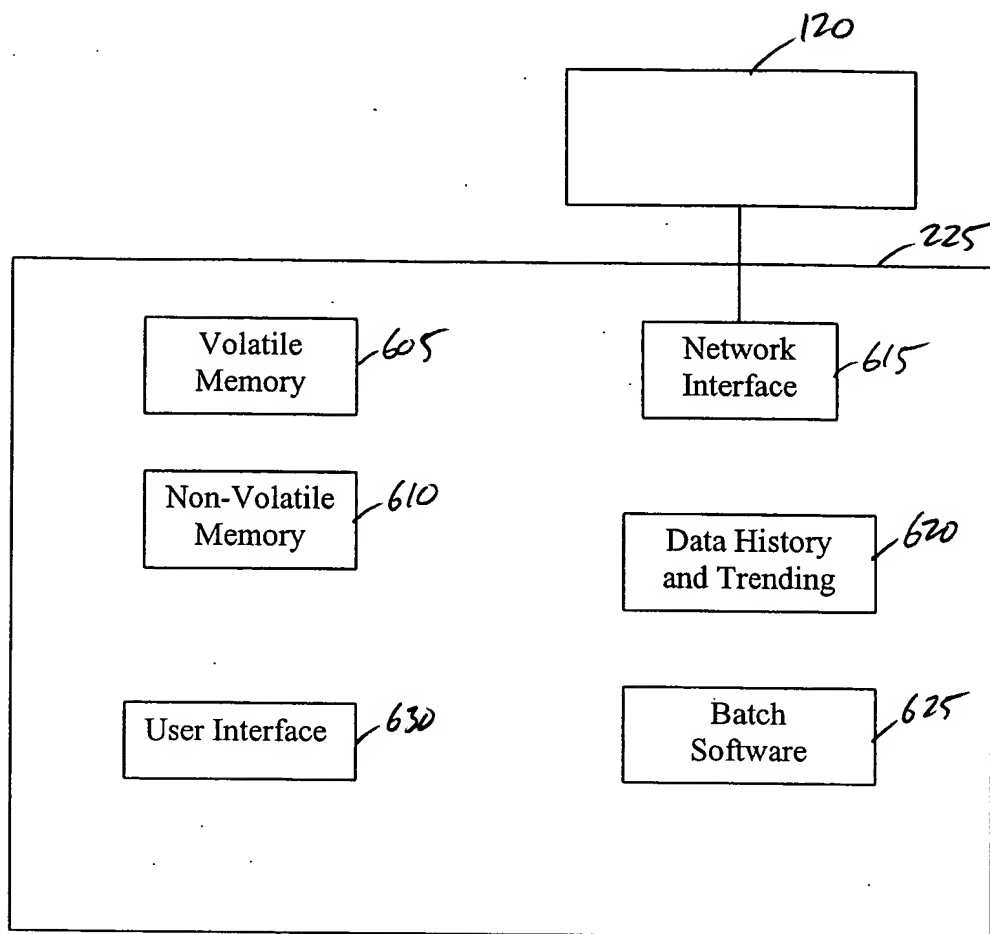


Figure 6

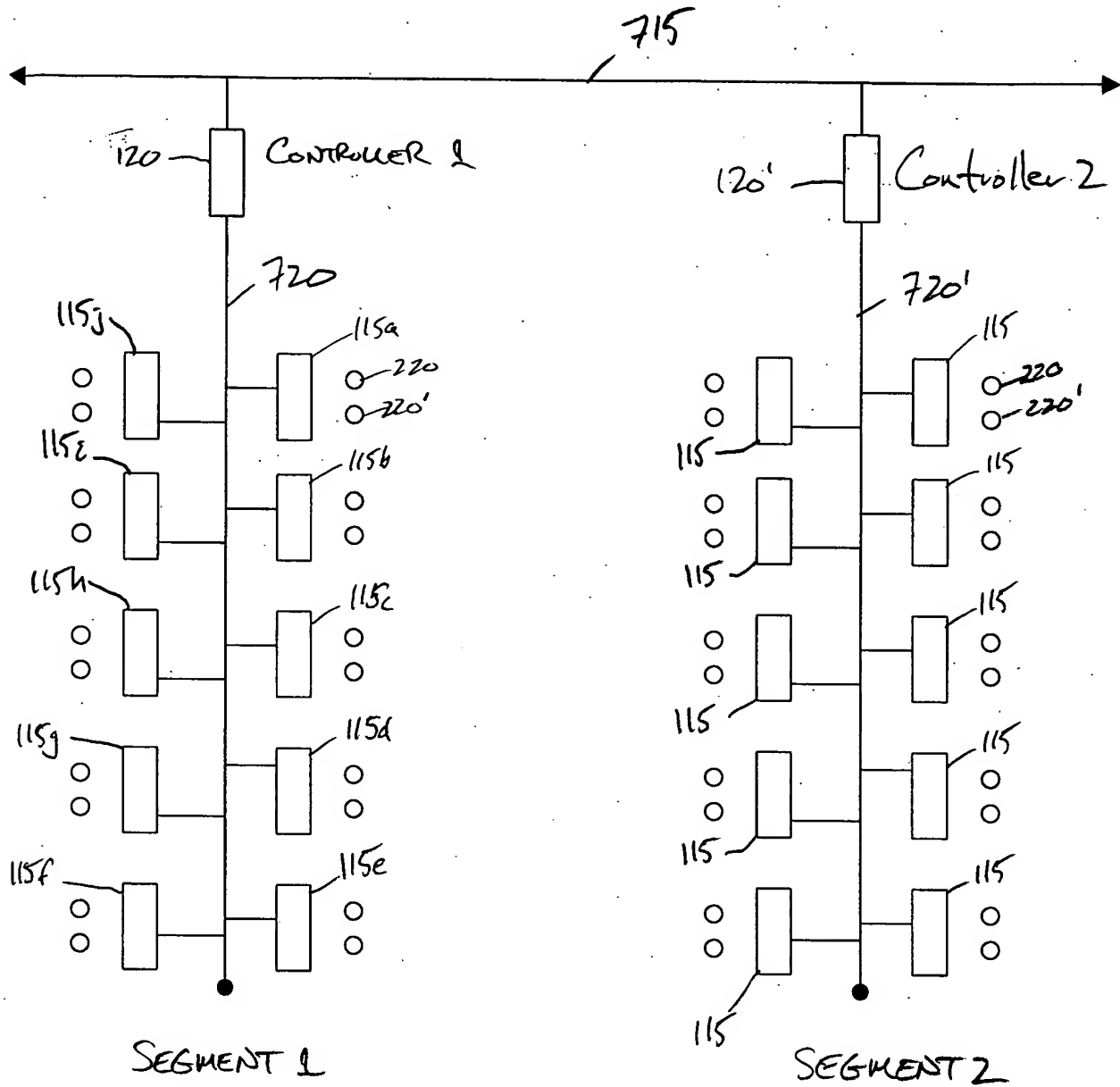


Figure 7